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HISTORY OF PRICES DURING THE WAR

WESLEY C. MITCHELL, Editor in Chief

PRICES OF BUILDING MATERIALS

By

HOMER HOYT



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PRICES OF BUILDING MATERIALS.

INTRODUCTION.

This bulletin gives a summary of the prices of 29 separate commodities that are used in building; it is not a combination of all the commodities quoted in the class bulletins dealing with construction materials. Thus, instead of taking the index numbers of the prices of the entire class of clay products, which would include pottery, only the clay products that enter into building operations are included. Some commodities in every class bulletin in the building materials group are not in fact specifically used for building, and such commodities are omitted. On the other hand, such building materials as structural steel, nails, and building paper are included, although they do not appear in any of the class bulletins in the building materials group. The index numbers of the aggregates of this selected series of prices of building materials are, therefore, to be carefully distinguished from the index numbers of the aggregates of the seven class bulletins in the building materials group.

The series to which this belongs includes three other similar groups, studies of foods, chemicals, and clothing. The purpose of the whole series is to provide a permanent record of the great revolution in prices during the world war and to make the price quotations gathered by various Government agencies available to men concerned with problems of business readjustment.

To throw as much light as possible on the course of price fluctuations, this bulletin begins with a general survey of building activity and summarizes the principal facts regarding production, imports, exports, stocks, Government purchases, and Government control which exercised some influence upon the prices of building materials from 1913 to the end of 1918.

The price charts are drawn on the uniform scale that is used in all the bulletins, except that on coal-tar products; consequently the price fluctuations of any building material can be compared with the price changes of practically every other commodity quoted in this series of publications.

Since the inquiry is concerned with the effect of the war, the charts are made to show the movement of prices away from the prewar level. This effect is produced by considering the average of the actual prices during the twelve-month period preceding the outbreak of the war (July 1, 1913, to June 30, 1914) as equal to 100 and reducing the actual prices for each month from January, 1913, to December, 1918, to the form of relative prices with the prewar average as base. For example, if the selling price of Portland cement averaged \$1 a barrel in the 12 months before the war, and if it fell to \$0.85 a barrel in January, 1915, the relative price in that month would be 85; and if it rose to \$1.75 a barrel in November, 1918, the relative price would be 175.

In order to show not only the fluctuations of specific commodities, but also the general trend of prices in different industries, index numbers have been computed. The index numbers are made by multiplying the monthly prices of each commodity from 1913 to 1918 by the amount of the commodity produced in 1917 plus imports. The products thus obtained are added up separately for each month, and, finally, the monthly aggregates are turned into relatives on the prewar base; that is, the average aggregates from July, 1913, to June, 1914, are made equal to 100, and all the monthly aggregates converted into relatives on that scale.

In addition to the group studies of foods, clothing, building materials, and chemicals, the series to which this bulletin belongs includes 50 pamphlets devoted to separate industries. There is also a set of international comparisons of price fluctuations, a special record of Government control over prices during the war, and, finally, a general summary of the whole inquiry, in which the methods employed are set forth more fully and in which the leading results from all the bulletins are drawn together for comparison.

The shortcomings of this bulletin are due largely to the fact that only one month after the completion of the class bulletins upon which it is based was allowed for its preparation. While results much more satisfactory to the writer could have been produced in six or nine months, it was felt that the publishing of these bulletins in time to be of aid in the solution of practical problems of business readjustment was of more importance than the greater degree of perfection that might have been obtained in a longer period of time.

BUILDING MATERIALS GROUP.

The course of building from 1913 to the end of 1918 was influenced by two sets of forces—the first being the business cycle and the second the war. The extension of building corresponds very closely to general business conditions, and this rule held true in 1913–1916. Building reached a high level during 1913 but declined somewhat during the slight business depression in 1914 and 1915. After the prices of building materials had reached a very low ebb by the fall of 1915 building was encouraged both by low costs and by the general era of prosperity which came as the result of war contracts. The general business prosperity made necessary plant extensions, and the rising wages encouraged the building of homes. When this building activity got started in full swing it kept on regardless of the advancing prices of building materials.

The war, as well as rising prices, brought the era of building activity to a close. Even in 1917 the higher cost of labor and materials, caused by our entry into the war, effected a drastic curtailment of building. The announcement of the War Industries Board, March 21, 1918, discouraged building of homes and other structures not used for war purposes, and made it difficult for contractors to secure priorities for cars, fuel, and labor, thus cutting off some demand for building that might have persisted in spite of the war. In 1918 the value of building permits in 143 leading cities was only slightly above 40 per cent of the value of building permits in 1916; and since the cost of building construction in 1918 was almost 100 per cent greater than in the first part of 1916, the actual physical volume of private

building in 1918 was only about 20 per cent of that of 1916. The construction of new dwelling houses in 1918 was probably not over 10 per cent of normal, because a considerable part of private building consisted of repairs to existing buildings and additions to munition factories. The statistics as to the value of building permits in the largest cities during these years 1913 to 1918 are shown by the United States Geological Survey as follows:

Year.	Number of cities reporting.	Number of permits.	Cost.
1913.....	147	285,850	\$859,657,250
1914.....	147	281,174	785,525,746
1915.....	144	283,792	799,735,860
1916.....	146	339,017	1,024,211,675
1917.....	145	259,668	687,415,605
1918.....	143	210,538	430,014,365

The report of the Building Materials Division shows the trend of the building materials industries from which the following facts are obtained.

The building program of the Government during the war only partially offset the decline in private building. The normal annual building program for the entire country is estimated at \$3,000,000,000 on the prewar basis of prices. The war building of the Government during 1918 amounted to slightly over \$1,500,000,000, which when added to the total expenditures for non-war construction in 1918—\$1,000,000,000 for all the cities and country districts of the United States—makes a total of \$2,500,000,000. While the value of the combined Government and private construction in 1918 was thus about 85 per cent of the value of private building before the war, the aggregate physical building program in 1918 was less than one-half of that of a normal year because of the doubling of the cost of building.

The decline of nonwar building varied according to locality. It was greatest in the large cities of the East where the car shortage was particularly acute and where labor was difficult to secure on account of the competition of munitions plants. The decline was least in the South and on the Pacific coast, where lumber was easily accessible, and where, in the case of the South, the concentration of military camps caused the building of additional houses for the war workers. Thus, while the decline in value of private building between 1916 and 1918 was 72 per cent in the New England cities, 58 per cent in the middle western cities, and 57 per cent in the middle Atlantic cities, it was only 46 per cent in the southern, 25 per cent in the cities of the Pacific coast, and 15 per cent in the leading cities of Texas and Oklahoma.

The curtailment in building also varied according to the material used. The decline was greatest in the case of brick, steel, stone, and hollow tile, and least in the case of lumber and cement. Lumber and cement are better adapted to quick construction than either brick or stone. Lumber had the additional advantage that the lumber mills used their own waste for fuel and hence required no coal, and also that large amounts of the lower grades of lumber were produced as a by-product of the military program. Cement, while requiring large

amounts of fuel, was nevertheless necessary for a great many Government uses, such as armories, barracks, roads, bridges, fortifications, dry docks, reservoirs, munition factories, and ships. Brick and stone, on the other hand, were in small demand because they were adapted chiefly to permanent construction. Brick was also undesirable because of the large amount of fuel which it required. Steel, of course, was of such vital importance to the war program that its use in building was eliminated wherever possible. As a result of these influences, the production of brick and stone for building declined to 25 per cent of normal during 1918, while that of cement and lumber declined only to 75 per cent of normal.

The production of building materials was also somewhat curtailed by the various regulations of the Fuel Administration and the War Industries Board. Thus the consumption of coal by the manufacturers of common brick, face brick, roofing tile, terra cotta, and sanitary ware was restricted by an order of the Fuel Administration in cooperation with the Building Materials Division of the War Industries Board on April 13, 1918, to 50 per cent of their normal requirements, while the fuel supply of the hollow tile and cement manufacturers was limited to 75 per cent of their prewar consumption. The War Industries Board also reduced the use of structural steel and other building materials by its control over priorities. These regulations, in fact, imposed little further curtailment in addition to that which had already been caused by the high prices of materials, car shortages, scarcity of labor, and the decline in building. A considerable saving in structural steel was undoubtedly effected directly by Government control, however, and in some localities the production of other building materials was somewhat checked. Permission to produce in excess of the limit was granted wherever the material was needed for a war purpose.

The decline in the production of various leading building materials in the United States during the war is shown by the following table. This table also shows how the production of building materials rises and falls with the swing of the business cycle, the production having dropped to a low point in 1914 and 1915 and having risen to a high level in 1916:

PRODUCTION OF BUILDING MATERIALS IN THE UNITED STATES, 1913-1918, INCLUSIVE.

Year.	Lumber. ¹	Structural steel. ²	Portland cement. ³	Common brick. ³	Indiana building stone. ³
	<i>M feet.</i>	<i>Long tons.</i>	<i>Bbls., 380 lbs.</i>	<i>M.</i>	<i>Cubic feet.</i>
1913.....	38,387,009	3,004,972	92,097,131	8,088,790	9,010,672
1914.....	37,346,023	2,031,124	88,230,170	7,146,571	7,929,006
1915.....	37,001,656	2,437,003	85,914,907	6,851,099	8,685,213
1916.....	39,807,251	3,518,746	91,521,198	7,394,202	8,545,534
1917.....	35,831,239	3,137,138	92,814,202	5,864,909	6,570,645
1918.....	32,700,000	42,051,000	71,632,000	42,500,000	2,760,000

¹ United States Forest Service.

² Iron Age.

³ United States Geological Survey.

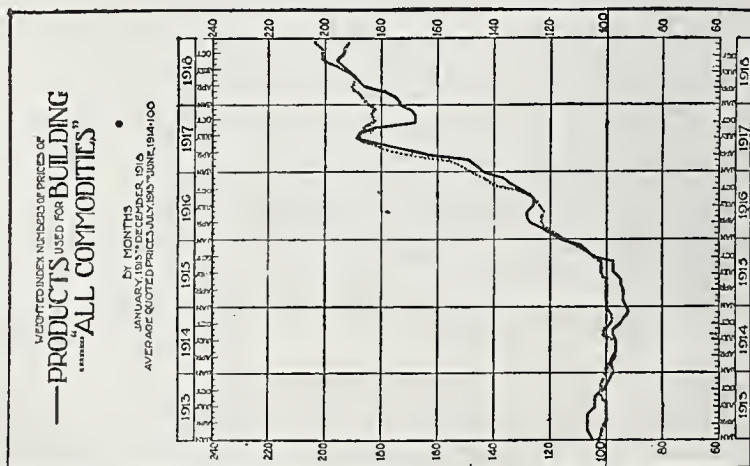
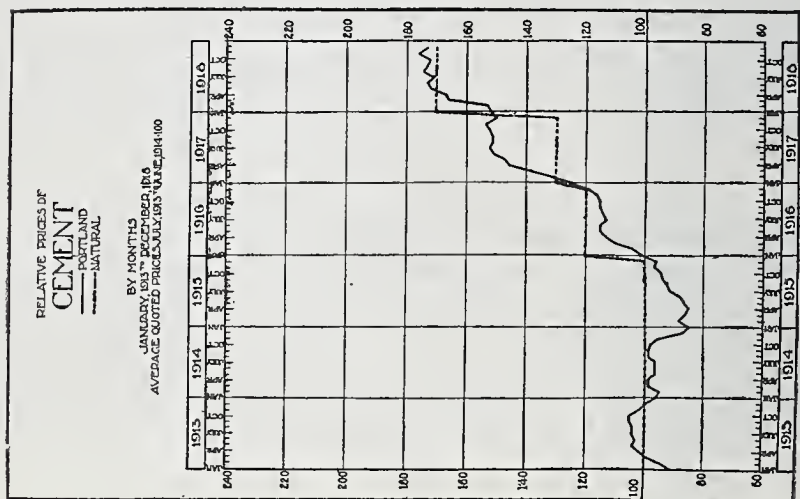
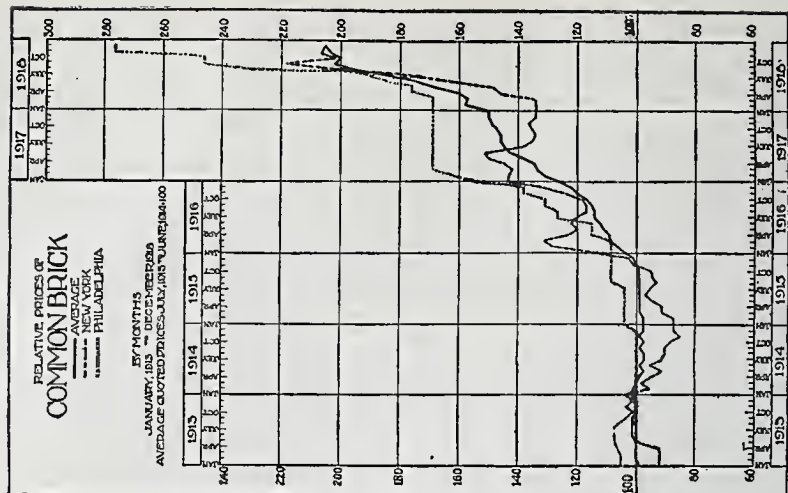
⁴ Estimated.

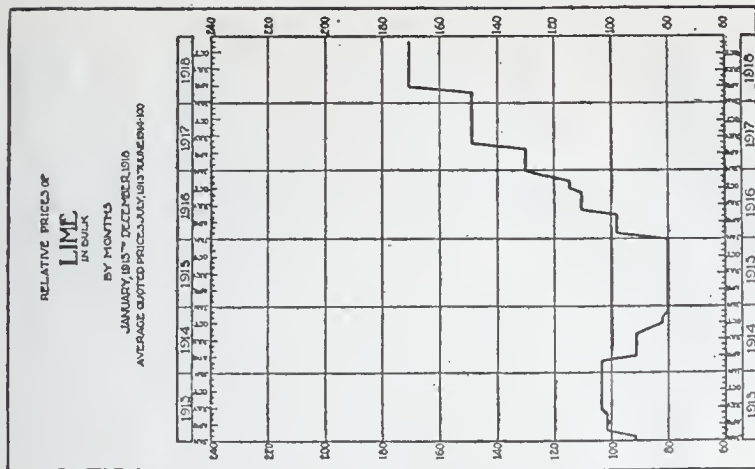
Our foreign trade in building materials was not large in comparison with our domestic production even before the war, and the wartime scarcity of tonnage reduced our exports even below their normal volume. Exports of lumber declined rapidly, while imports of lumber from Canada continued at their normal rate; so that the

United States became a wood-importing country for the first time in its history. Exports of Portland cement, normally about 3 per cent of our production, were not appreciably curtailed. Exports of brick were always of small importance and confined to the Canadian border, but even this trade almost disappeared during the war. Structural steel was shipped abroad to the Allies at about three-fourths of the normal rate, and exports of paint and nails even surpassed their prewar level. All the basic building materials are relatively abundant in the United States. Our imports are small and could be eliminated altogether. Imports of Italian marble, our chief imported construction material, were greatly reduced during the war.

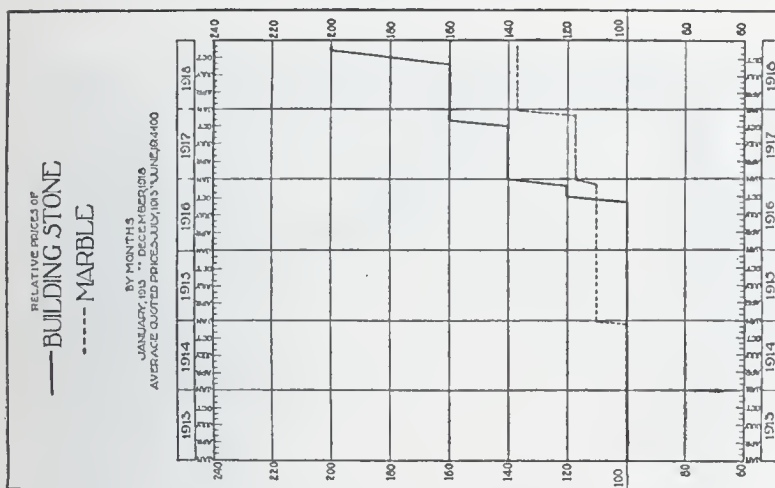
The prices of all building materials advanced in response to the rising labor cost. The exceptional rise in the price of structural steel that was caused by the tremendous demand for steel for the war program pushed the average prices of the entire building materials group to a high peak in July, 1917; while the drastic reduction in the prices of structural steel that was effected by Government price fixing in October, 1917, plunged the building materials curve temporarily downward. The prices of building materials other than steel lagged behind the prices of "all commodities"; and the upward movement in prices began later and was less pronounced than the rise in structural steel. The abundant sources of supply of ordinary building materials and the keen competition between the numerous producers prevented prices from outstripping wages and materials cost.

Of course, the prices of some structural materials advanced more rapidly than those of others. Common-brick prices, despite the competitive character of the brick industry, increased somewhat more rapidly than cement or lumber prices. The chief cost of producing common brick is labor. Overhead charges in making brick are small, so that when the demand for brick is not sufficient to cover rising wages cost, the brick manufacturers will close their plants, curtail production, and prevent the overstocking of the market.

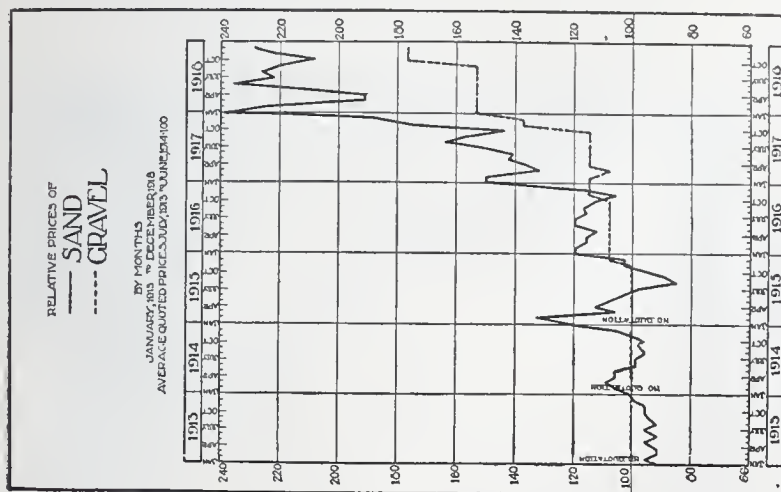




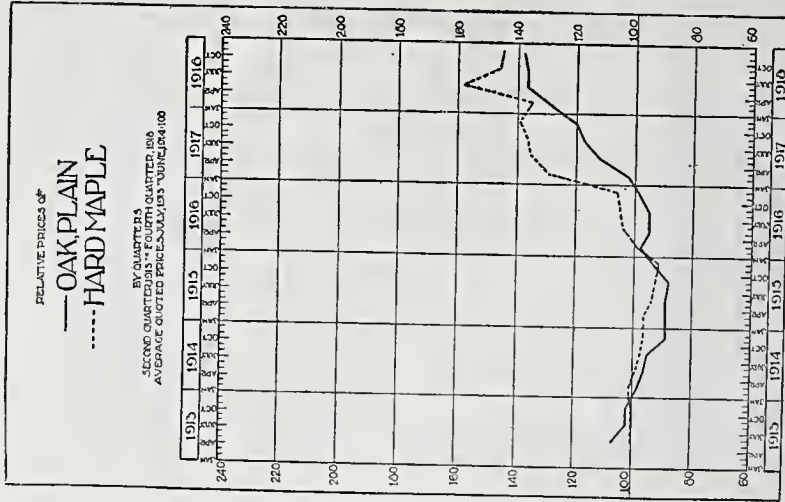
RELATIVE PRICES.—Lime, in bulk.—By months, January, 1913, to December, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)



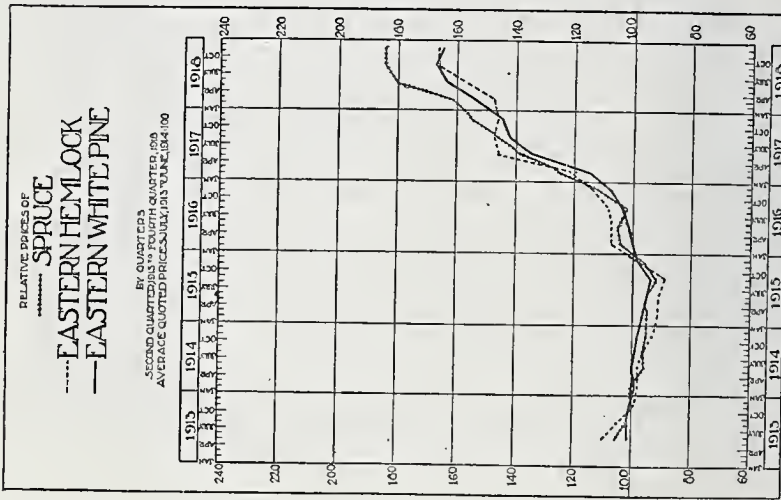
RELATIVE PRICES.—Building Stone, and Marble.—By months, January, 1913, to December, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)



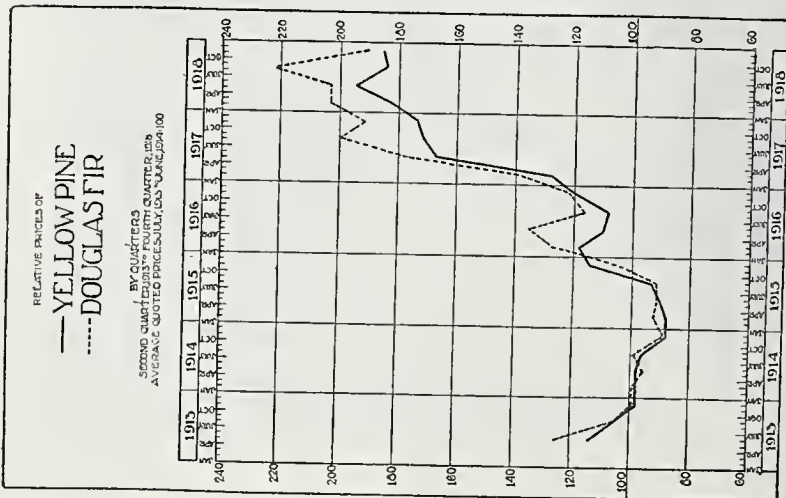
RELATIVE PRICES.—Sand and Gravel.—By months, January, 1913, to December, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)



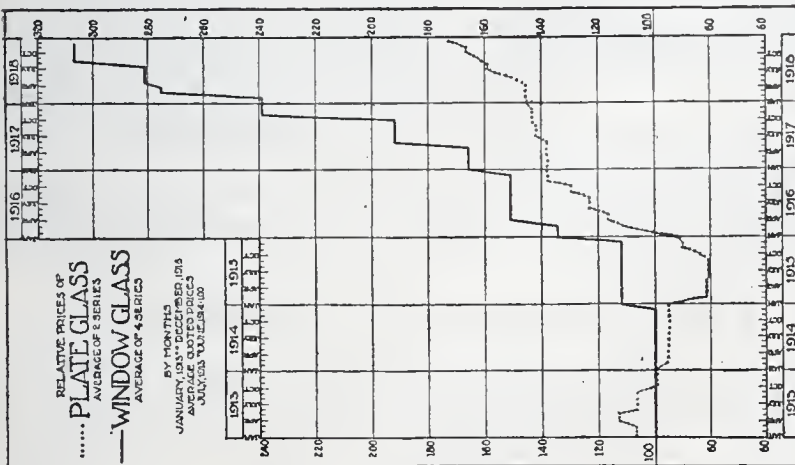
RELATIVE PRICES.—Oak, plain; and Hard Maple.—
By quarters, second quarter, 1913, to fourth quarter, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)



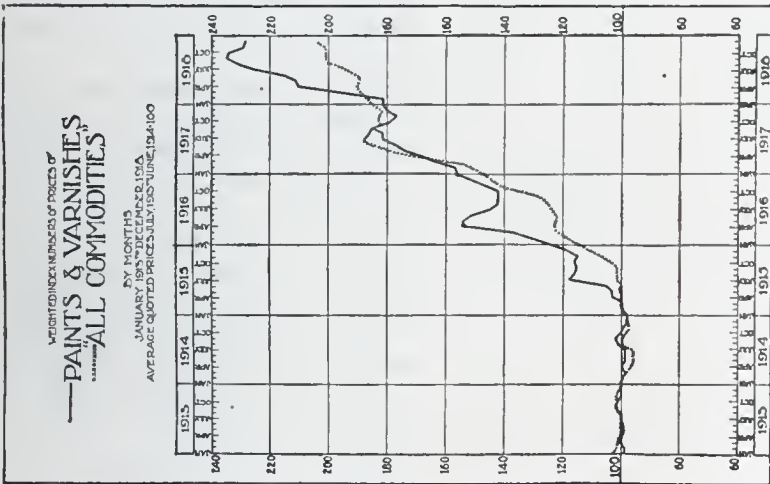
RELATIVE PRICES.—Spruce; Eastern Hemlock; and Eastern White Pine.—By quarters, second quarter, 1913, to fourth quarter, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)



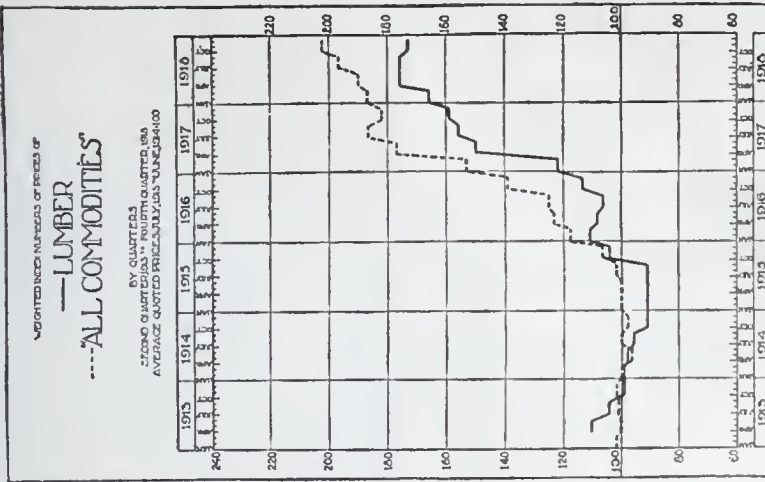
RELATIVE PRICES.—Yellow Pine; and Douglas, Fir.—By months, January, 1913, to December, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)



RELATIVE PRICES.—Plate Glass, average of 2 series; Window Glass, average of 4 series.—By months, January, 1913, to December, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)



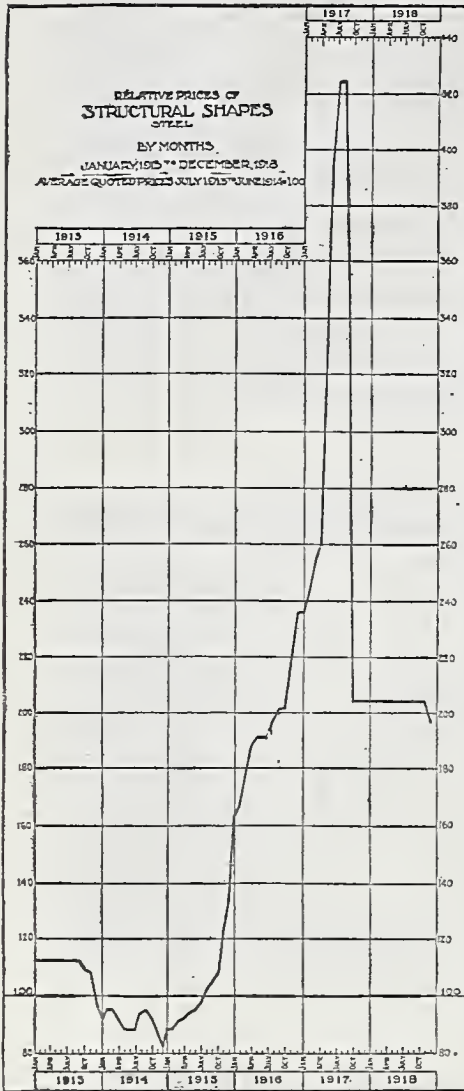
WEIGHTED INDEX NUMBERS OF PRICES.—Paints and Varnishes; and "All Commodities."—By months, January, 1913, to December, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)



WEIGHTED INDEX NUMBERS.—Lumber and "All Commodities."—By quarters, second quarter, 1913, to fourth quarter, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)

Cement producers, on the other hand, with their high overhead costs, are tempted to run their plants at full capacity even though they must lower their prices to sell their entire output. Lumbermen are

also encouraged to produce more than the market can absorb in order to convert their timber surplus into cash. The fixing of the prices of lumber and cement for Government purchases on the basis of the cost of production also had some effect in restraining the advance in lumber and cement prices. The maximum prices established for common brick at New York, Philadelphia, and Washington applied only to Government purchases, and they were substantially in accord with the market prices. Stone prices exhibited several tendencies. The producers of Indiana limestone advanced their prices in conformity to the rising cost of production, regardless of the rapid decline in the demand for building materials, but the poorly organized producers of building granite, marble, and crushed limestone were prevented by competition among themselves and by the competition of substitute building materials like building lime, stone, cement, brick, and hollow tile from raising their prices in full conformity to the increasing cost of wages and materials. The prices of paint rose to a higher point than the prices of building materials other than steel because of the rapid rise in the prices of paint materials, particularly linseed oil. The prices of nails also advanced



RELATIVE PRICES.—Structural Shapes, steel.—By months, January, 1913, to December, 1918. (Average quoted prices, July, 1913, to June, 1914=100.)

more than the prices of nearly all other building materials because of the heavy demand for steel.

The average rise in the prices of all building materials, including steel, thus does not fall much below the average increase in the prices of "all commodities."

WEIGHTS OF BUILDING MATERIALS.

Statistics for actual production during 1917, plus imports, were obtained for 24 of the 29 commodities listed in this bulletin. No weights whatever could be obtained for three minor commodities—tarred felt paper, rubber roofing paper, and putty. The weight for

sanitary ware was computed by dividing the value of the 1917 production by the price of sanitary ware in 1917. The weight for paint and varnish is the aggregate of 30 different commodities covered in the bulletin on paint and varnishes.

TABLE OF WEIGHTS OF BUILDING MATERIALS.

Portland cement.....barrels..	92,800,000	Lumber—Continued.	
Crushed limestone.....short tons..	17,500,000	Plain oak.....do.....	2,250,000
Building sand.....do.....	25,400,000	Hard maple.....do.....	860,000
Common brick.....M.....	5,860,000	Wire nails.....100-pound kegs..	18,000,000
Front brick.....M.....	758,000	Lime.....short tons..	3,660,000
Hollow building tile.....short tons..	2,000,000	Building paper.....do.....	313,000
Building limestone.....cubic feet..	6,570,000	Tarred felt paper.....do.....	(¹)
Building granite.....do.....	5,500,000	Rubber roofing paper.....do.....	(¹)
Building marble.....do.....	3,950,000	Shingles.....M.....	10,600,000
Structural steel.....pounds..	6,790,000,000	Roofing slate.....100-foot squares..	704,000
Lumber:		Window glass.....50-foot boxes..	11,700,000
Southern yellow pine..M board ft..	13,540,000	Plate glass.....square feet..	66,000,000
Douglas fir.....do.....	5,580,000	Putty.....do.....	(¹)
Eastern white pine.....do.....	2,250,000	Sanitary ware.....pieces..	730,000
Eastern hemlock.....do.....	2,200,000	Paint and varnishes.....dollars..	193,194,000
Spruce.....do.....	1,120,000		

¹ Not weighted.

INDEX NUMBERS OF THE PRICES OF BUILDING MATERIALS, BY MONTHS, QUARTERS, AND YEARS, 1913-1918.

[Base: Average prices July, 1913, to June, 1914=100.]

Series of quotations.	Build- ing mate- rials.	Port- land ce- ment.	Crushed lime- stone.	Build- ing sand.	Com- mon brick.	Front brick.	Hol- low build- ing tile.	Build- ing lime- stone.	Build- ing gran- ite.	Build- ing mar- ble.
Years.										
1913.....	104	101	100	94	100	101	100	100	100	100
1914.....	97	96	100	102	99	102	100	100	100	100
1915.....	98	90	100	105	99	105	90	100	100	110
1916.....	127	113	108	116	113	106	134	105	110	110
1917.....	168	146	120	153	141	133	156	143	120	117
1918.....	188	168	153	218	180	178	188	168	134	137
Quarters.										
1913—First.....	106	95	100	93	100	101	100	100	100	100
Second.....	107	103	100	93	101	101	100	100	100	100
Third.....	104	104	100	94	101	101	100	100	100	100
Fourth.....	100	102	100	97	100	101	100	100	100	100
1914—First.....	98	96	100	105	100	101	100	100	100	100
Second.....	97	97	100	104	99	98	100	100	100	100
Third.....	97	98	100	98	98	105	100	100	100	100
Fourth.....	93	94	100	100	98	105	100	100	100	100
1915—First.....	93	86	100	120	98	105	88	100	100	110
Second.....	95	86	100	108	99	105	88	100	100	110
Third.....	98	92	100	91	99	105	88	100	100	110
Fourth.....	107	96	100	100	100	105	96	100	100	110
1916—First.....	120	105	100	119	106	105	125	100	110	110
Second.....	128	114	110	116	111	105	125	100	110	110
Third.....	126	114	110	118	114	105	138	100	110	110
Fourth.....	134	117	110	112	120	109	150	120	110	110
1917—First.....	146	132	110	144	130	119	150	140	120	117
Second.....	172	148	120	140	139	138	150	140	120	117
Third.....	186	151	125	158	146	138	163	140	120	117
Fourth.....	168	151	125	168	149	138	163	153	120	117
1918—First.....	175	157	125	217	155	154	175	160	120	137
Second.....	188	171	150	213	168	165	175	160	128	137
Third.....	194	172	169	223	193	192	200	160	144	137
Fourth.....	193	174	169	220	202	203	200	193	144	137
Months.										
1913—January.....	105	91	100	92	99	101	100	100	100	100
February.....	106	94	100	96	100	101	100	100	100	100
March.....	107	99	100	92	100	101	100	100	100	100
April.....	107	102	100	92	100	101	100	100	100	100
May.....	107	104	100	96	100	101	100	100	100	100
June.....	107	103	100	92	101	101	100	100	100	100
July.....	104	104	100	96	101	101	100	100	100	100
August.....	104	104	100	92	101	101	100	100	100	100
September.....	104	105	100	94	101	101	100	100	100	100
October.....	101	105	100	96	100	101	100	100	100	100
November.....	100	102	100	96	100	101	100	100	100	100
December.....	99	100	100	99	100	101	100	100	100	100
1914—January.....	98	96	100	101	101	101	100	100	100	100
February.....	98	95	100	106	101	101	100	100	100	100
March.....	99	99	100	109	100	101	100	100	100	100
April.....	98	99	100	106	99	101	100	100	100	100
May.....	97	97	100	106	98	97	100	100	100	100
June.....	97	97	100	99	99	97	100	100	100	100
July.....	97	97	100	99	98	105	100	100	100	100
August.....	98	99	100	96	98	105	100	100	100	100
September.....	98	99	100	99	99	105	100	100	100	100
October.....	95	98	100	96	98	105	100	100	100	100
November.....	94	96	100	99	99	105	100	100	100	100
December.....	92	87	100	106	98	105	100	100	100	100

INDEX NUMBERS OF THE PRICES OF BUILDING MATERIALS, BY MONTHS, QUARTERS, AND YEARS, 1913-1918—Continued.

[Base: Average prices July, 1913, to June, 1914=100.]

Series of quotations.	Build- ing mate- rials.	Port- land ce- ment.	Crushed lime- stone.	Build- ing sand.	Com- mon brick.	Front brick.	Hol- low build- ing tile.	Build- ing lime- stone.	Build- ing gran- ite.	Build- ing mar- ble.
Months.										
915—January.....	93	85	100	120	98	105	88	100	100	110
February.....	94	88	100	133	98	105	88	100	100	110
March.....	94	86	100	106	99	105	88	100	100	110
April.....	94	85	100	113	99	105	88	100	100	110
May.....	95	86	100	109	99	105	88	100	100	110
June.....	95	87	100	103	99	105	88	100	100	110
July.....	98	91	100	99	99	105	88	100	100	110
August.....	98	92	100	85	99	105	88	100	100	110
September.....	98	93	100	89	99	105	88	100	100	110
October.....	105	94	100	96	99	105	88	100	100	110
November.....	107	97	100	103	100	105	100	100	100	110
December.....	109	96	100	103	101	105	100	100	100	110
916—January.....	117	101	100	120	103	105	125	100	110	110
February.....	120	104	100	120	106	105	125	100	110	110
March.....	123	110	100	116	109	105	125	100	110	110
April.....	127	113	110	116	109	105	125	100	110	110
May.....	128	115	110	113	111	105	125	100	110	110
June.....	128	115	110	120	112	105	125	100	110	110
July.....	126	113	110	120	114	105	138	100	110	110
August.....	126	114	110	116	114	105	138	100	110	110
September.....	127	115	110	117	115	105	138	100	110	110
October.....	131	115	110	113	117	105	150	120	110	110
November.....	134	116	110	106	120	105	150	120	110	110
December.....	137	119	110	116	122	117	150	120	110	110
917—January.....	144	125	110	150	126	117	150	140	120	117
February.....	146	132	110	150	131	117	150	140	120	117
March.....	149	138	110	132	133	123	150	140	120	117
April.....	164	146	110	137	134	138	150	140	120	117
May.....	171	147	125	142	138	138	150	140	120	117
June.....	180	151	125	141	143	138	150	140	120	117
July.....	188	152	125	152	145	138	163	140	120	117
August.....	188	151	125	164	146	138	163	140	120	117
September.....	182	151	125	157	146	138	163	140	120	117
October.....	168	152	125	144	147	138	163	140	120	117
November.....	168	153	125	174	149	138	163	160	120	117
December.....	169	150	125	188	150	138	163	160	120	117
918—January.....	173	152	125	239	150	154	175	160	120	137
February.....	174	153	125	222	158	154	175	160	120	137
March.....	178	166	125	191	157	154	175	160	120	137
April.....	186	167	140	191	160	154	175	160	120	137
May.....	188	172	140	212	168	170	175	160	120	137
June.....	190	173	169	236	175	170	175	160	144	137
July.....	192	171	169	222	183	170	200	160	144	137
August.....	194	174	169	226	195	203	200	160	144	137
September.....	196	173	169	221	202	203	200	160	144	137
October.....	193	172	169	209	200	203	200	180	144	137
November.....	193	176	169	222	203	203	200	200	144	137
December.....	192	173	169	229	205	203	200	200	144	137

INDEX NUMBERS OF THE PRICES OF BUILDING MATERIALS, BY MONTHS, QUARTERS, AND YEARS, 1913-1918.

[Base: Average prices July, 1913, to June, 1914=100.]

Series of quotations.	Structural steel.	Lumber.							Wire nails.	Lime.
		South- ern yellow pine.	Doug- las fir.	East- ern white pine.	East- ern hem- lock.	Spruce.	Plain oak.	Hard maple.		
Years.										
1913.....	119	105	114	101	105	102	103	100	106	100
1914.....	91	95	96	99	96	97	95	99	98	91
1915.....	103	96	96	96	92	94	90	94	104	80
1916.....	201	114	125	103	109	106	97	103	158	105
1917.....	290	160	177	135	140	140	113	135	223	141
1918.....	236	186	205	162	159	177	135	146	219	166
Quarters.										
1913—First.....	136								110	94
Second.....	122	114	127	101	110	105	107	100	112	101
Third.....	113	106	106	101	104	101	102	100	104	103
Fourth.....	103	98	99	100	99	100	102	100	99	103
1914—First.....	95	98	99	99	98	100	99	101	99	103
Second.....	89	98	96	100	98	98	96	99	98	91
Third.....	92	96	99	99	96	96	95	98	98	90
Fourth.....	87	88	89	98	93	95	89	97	98	81
1915—First.....	87	88	93	96	91	95	89	97	99	80
Second.....	95	90	92	95	91	95	89	94	97	80
Third.....	103	93	92	94	89	92	88	93	102	80
Fourth.....	127	114	105	98	98	96	93	92	119	80
1916—First.....	167	118	128	100	107	104	98	99	142	92
Second.....	202	109	135	101	107	105	95	104	154	102
Third.....	202	108	117	103	108	102	95	105	160	110
Fourth.....	233	120	121	107	113	112	98	106	177	117
1917—First.....	264	127	138	115	121	125	102	129	192	130
Second.....	321	167	177	135	146	139	112	135	219	136
Third.....	337	172	200	143	147	142	118	136	251	149
Fourth.....	237	173	192	145	146	155	120	139	231	149
1918—First.....	237	182	203	154	147	161	129	135	219	149
Second.....	237	194	203	163	156	180	137	158	219	171
Third.....	237	184	222	167	166	184	137	146	219	171
Fourth.....	234	185	191	165	166	184	138	145	219	171
Months.										
1913—January.....	138								110	91
February.....	135								110	91
March.....	134								110	101
April.....	133	114	127	101	110	105	107	100	113	101
May.....	118	114	127	101	110	105	107	100	113	101
June.....	114	114	127	101	110	105	107	100	110	101
July.....	114	106	106	101	104	101	102	100	106	103
August.....	114	106	106	101	104	101	102	100	105	103
September.....	111	106	106	101	104	101	102	100	102	103
October.....	108	98	99	100	99	100	102	100	100	103
November.....	102	98	99	100	99	100	102	100	100	103
December.....	99	98	99	100	99	100	102	100	97	103
1914—January.....	95	98	99	99	98	100	99	101	96	103
February.....	95	98	99	99	98	100	99	101	100	103
March.....	94	98	99	99	98	100	99	101	100	103
April.....	91	98	96	100	98	98	96	99	100	91
May.....	90	98	96	100	98	98	96	99	99	91
June.....	88	98	96	100	98	98	96	99	94	91
July.....	89	96	99	99	96	96	95	98	95	91
August.....	94	96	99	99	96	96	95	98	98	91
September.....	95	96	99	99	96	96	95	98	100	87
October.....	91	88	89	98	93	95	89	97	100	82
November.....	87	88	89	98	93	95	89	97	100	82
December.....	84	88	89	98	93	95	89	97	95	80

INDEX NUMBERS OF THE PRICES OF BUILDING MATERIALS, BY MONTHS, QUARTERS, AND YEARS, 1913-1918—Continued.

[Base: Average prices, July, 1913, to June, 1914=100.]

Series of quotations.	Structural steel.	Lumber.							Wire nails.	Lime.
		South- ern yellow pine.	Doug- las fir.	East- ern white pine.	East- ern hem- lock.	Spruce.	Plain oak.	Hard maple.		
Months.										
1915—January.....	87	88	93	96	91	95	89	97	96	80
February.....	87	88	93	96	91	95	89	97	99	80
March.....	87	88	93	96	91	95	89	97	100	80
April.....	95	90	92	95	91	95	89	94	98	80
May.....	95	90	92	95	91	95	89	94	97	80
June.....	95	90	92	95	91	95	89	94	97	80
July.....	99	93	92	94	89	92	88	93	99	80
August.....	103	93	92	94	89	92	88	93	101	80
September.....	106	93	92	94	89	92	88	93	106	80
October.....	114	114	105	98	98	96	93	92	111	80
November.....	126	114	105	98	98	96	93	92	117	80
December.....	141	114	105	98	98	96	93	92	127	80
1916—January.....	150	118	128	100	107	104	98	99	133	80
February.....	163	118	128	100	107	104	98	99	142	98
March.....	189	118	128	100	107	104	98	99	150	98
April.....	202	109	135	101	107	105	95	104	150	98
May.....	205	109	135	101	107	105	95	104	157	98
June.....	200	109	135	101	107	105	95	104	157	110
July.....	197	108	117	103	108	102	95	105	157	110
August.....	199	108	117	103	108	102	95	105	162	110
September.....	208	108	117	103	108	102	95	105	163	110
October.....	217	120	121	107	113	112	98	106	165	114
November.....	228	120	121	107	113	112	98	106	178	114
December.....	256	120	121	107	113	112	98	106	188	123
1917—January.....	256	127	138	115	121	125	102	129	188	130
February.....	256	127	138	115	121	125	102	129	188	130
March.....	280	127	138	115	121	125	102	129	199	130
April.....	308	167	177	135	146	139	112	135	205	130
May.....	316	167	177	135	146	139	112	135	219	130
June.....	340	167	177	135	146	139	112	135	232	149
July.....	356	172	200	143	147	142	118	136	251	149
August.....	340	172	200	143	147	142	118	136	251	149
September.....	316	172	200	143	147	142	118	136	251	149
October.....	237	173	192	145	146	155	120	139	251	149
November.....	237	173	192	145	146	155	120	139	224	149
December.....	237	173	192	145	146	155	120	139	219	149
1918—January.....	237	182	203	154	147	161	129	135	219	149
February.....	237	182	203	154	147	161	129	135	219	149
March.....	237	182	203	154	147	161	129	135	219	149
April.....	237	194	203	163	156	180	137	158	219	171
May.....	237	194	203	163	156	180	137	158	219	171
June.....	237	194	203	163	156	180	137	158	219	171
July.....	237	184	222	167	166	184	137	146	219	171
August.....	237	184	222	167	166	184	137	146	219	171
September.....	237	184	222	167	166	184	137	146	219	171
October.....	237	185	191	165	166	184	138	145	219	171
November.....	237	185	191	165	166	184	138	145	219	171
December.....	229	185	191	165	166	184	138	145	219	171

INDEX NUMBERS OF THE PRICES OF BUILDING MATERIALS, BY MONTHS, QUARTERS, AND YEARS, 1913-1918.

[Base: Average prices July, 1913, to June, 1914=100.]

Series of quotations.	Build- ing paper.	Tarred felt paper.	Rub- ber roofing paper.	Shin- gles, red cedar.	Roof- ing slate.	Win- dow glass.	Plate glass.	Putty.	Sani- tary ware.	Paint and var- nishes.
Years.										
1913.....	100	100	100	109	97	100	107	100	100	100
1914.....	100	100	100	95	103	100	96	100	100	100
1915.....	100	101	99	93	105	112	85	100	100	109
1916.....	153	150	117	106	109	147	121	283	100	144
1917.....	237	168	119	157	136	189	141	348	107	173
1918.....	202	179	126	156	159	282	156	405	168	214
Quarters.										
1913—First.....	100	100	100	118	94	100	108	100	100	99
Second.....	100	100	100	117	94	100	111	100	100	99
Third.....	100	100	100	109	100	100	108	100	100	101
Fourth.....	100	100	100	95	100	100	100	100	100	100
1914—First.....	100	100	100	99	100	100	97	100	100	100
Second.....	100	100	100	97	101	100	96	100	100	99
Third.....	100	100	100	95	105	100	96	100	100	101
Fourth.....	100	100	100	90	105	100	96	100	100	99
1915—First.....	100	100	100	93	105	112	87	100	100	99
Second.....	100	100	100	92	105	112	82	100	100	104
Third.....	100	(¹)	100	91	105	112	81	100	100	116
Fourth.....	100	103	97	95	105	112	88	100	100	117
1916—First.....	103	106	94	103	105	134	103	268	100	131
Second.....	144	164	123	107	107	151	119	287	100	153
Third.....	150	164	126	102	110	151	126	287	100	143
Fourth.....	213	164	126	114	115	151	136	287	100	147
1917—First.....	249	166	103	133	126	166	138	287	100	159
Second.....	238	171	143	172	133	174	138	322	102	173
Third.....	246	170	104	167	140	192	142	391	112	183
Fourth.....	213	166	126	155	147	223	144	391	115	178
1918—First.....	209	171	126	158	147	251	146	391	115	186
Second.....	200	181	126	167	154	279	149	391	164	212
Third.....	200	181	126	160	168	290	161	430	205	230
Fourth.....	200	181	126	138	168	307	169	409	189	230
Months.										
1913—January.....	100	100	100	114	94	100	107	100	100	99
February.....	100	100	100	120	94	100	107	100	100	99
March.....	100	100	100	120	94	100	107	100	100	100
April.....	100	100	100	120	94	100	113	100	100	100
May.....	100	100	100	117	94	100	113	100	100	99
June.....	100	100	100	114	94	100	107	100	100	99
July.....	100	100	100	114	100	100	107	100	100	100
August.....	100	100	100	109	100	100	107	100	100	100
September.....	100	100	100	103	100	100	107	100	100	102
October.....	100	100	100	97	100	100	100	100	100	101
November.....	100	109	100	92	100	100	100	100	100	100
December.....	100	100	100	95	100	100	100	100	100	100
1914—January.....	100	100	100	97	100	100	100	100	100	100
February.....	100	100	100	100	100	100	96	100	100	100
March.....	100	100	100	100	100	100	96	100	100	99
April.....	100	100	100	100	100	100	96	100	100	100
May.....	100	100	100	95	100	100	96	100	100	99
June.....	100	100	100	97	105	100	96	100	100	99
July.....	100	100	100	97	105	100	96	100	100	99
August.....	100	100	100	95	105	100	96	100	100	101
September.....	100	100	100	92	105	100	96	100	100	102
October.....	100	100	100	92	105	100	96	100	100	100
November.....	100	100	100	89	105	100	96	100	100	99
December.....	100	100	100	89	105	100	96	100	100	98

¹ No quotation.

INDEX NUMBERS OF THE PRICES OF BUILDING MATERIALS, BY MONTHS
QUARTERS, AND YEARS, 1913-1918.—Continued.

[Base: Average prices July, 1913, to June, 1914=100.]

Series of quotations.	Build- ing paper.	Tarred felt paper.	Rub- ber roofing paper.	Shin- gles, red cedar.	Roof- ing slate.	Win- dow glass.	Plate glass.	Putty.	Sani- tary ware.	Paint and var- nishes.
Months.										
1915—January.....	100	100	100	91	105	112	96	100	100	98
February.....	100	100	100	95	105	112	82	100	100	100
March.....	100	100	100	92	105	112	82	100	100	100
April.....	100	100	100	91	105	112	82	100	100	103
May.....	100	100	100	92	105	112	82	100	100	103
June.....	100	(¹)	100	92	105	112	81	100	100	105
July.....	100	(¹)	100	89	105	112	81	100	100	118
August.....	100	(¹)	100	92	105	112	81	100	100	116
September.....	100	(¹)	100	92	105	112	81	100	100	115
October.....	100	103	100	92	105	112	81	100	100	116
November.....	100	103	100	92	105	112	90	100	100	115
December.....	100	101	91	100	105	112	90	100	100	119
1916—January.....	100	104	91	99	105	131	92	230	100	124
February.....	100	103	91	104	105	134	105	287	100	132
March.....	108	112	100	106	105	134	111	287	100	137
April.....	133	164	117	107	105	151	117	287	100	154
May.....	150	161	126	106	105	151	117	287	100	154
June.....	150	164	126	106	110	151	123	287	100	152
July.....	150	164	126	103	110	151	123	287	100	145
August.....	150	164	126	102	110	151	123	287	100	142
September.....	150	164	126	100	110	151	130	287	100	142
October.....	213	164	126	111	110	151	130	287	100	142
November.....	213	164	126	117	110	151	138	287	100	147
December.....	213	164	126	114	126	151	138	287	100	151
1917—January.....	220	164	126	120	126	166	138	287	100	156
February.....	238	164	143	132	126	166	138	287	100	157
March.....	238	171	143	147	126	166	138	287	100	163
April.....	238	171	143	177	126	166	138	287	100	168
May.....	238	171	143	184	136	166	138	287	100	174
June.....	238	171	143	156	136	192	138	391	105	177
July.....	238	171	143	167	136	192	142	391	105	182
August.....	313	171	148	174	136	192	142	391	115	182
September.....	213	166	126	160	147	192	142	391	115	185
October.....	213	166	126	151	147	192	144	391	115	179
November.....	213	166	126	156	147	239	144	391	115	177
December.....	213	166	126	159	147	239	144	391	115	180
1918—January.....	213	166	126	155	147	239	146	391	115	181
February.....	213	166	126	153	147	239	146	391	115	181
March.....	200	181	126	166	147	275	146	391	115	195
April.....	200	181	126	165	147	275	146	391	131	210
May.....	200	181	126	161	147	281	148	391	157	211
June.....	200	181	126	174	168	281	153	391	205	214
July.....	200	181	126	172	168	281	159	470	205	225
August.....	200	181	126	157	168	281	159	409	205	231
September.....	200	181	126	150	168	307	163	409	205	235
October.....	200	181	126	132	168	307	167	409	205	234
November.....	200	181	126	138	168	307	167	409	205	229
December.....	200	181	126	144	168	307	173	409	157	228

¹ No quotation.

PRICE BULLETINS ISSUED BY THE WAR INDUSTRIES BOARD.

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5. Prices of clothing.
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21. Prices of poultry and dairy products.
22. Prices of fish and oysters.

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29. Prices of buttons.

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34. Prices of ferroalloys, nonferrous and rare metals.

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35. Prices of coal and coke.
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52. Prices of natural dyestuffs and tanning chemicals.
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54. Prices of drugs and pharmaceuticals.
55. Prices of proprietary preparations.
56. Prices of explosives.
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